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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,921	04/02/2001	Scott J. Carter	VITLCOM.054A	2126

20995 7590 07/27/2004

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EXAMINER	
BROWN, VERNAL U	

ART UNIT	PAPER NUMBER
2635	10

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/824,921	CARTER, SCOTT J.	
	Examiner	Art Unit	
	Vernal U Brown	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18-39* is/are rejected.

7)☐ Claim(s) *17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to communication filed on December 3, 2003.

Response to Amendment

The examiner has acknowledged the amendment of claims 1, 15, and 18.

Drawings

The objection to the drawings has been withdrawn

Response to Arguments

Applicant's arguments with respect to claims18-19 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed December 3, 2003 with respect to claims 1-16 and 20-35 have been fully considered but they are not persuasive.

Regarding applicant's argument concerning transmitting a wireless interrogating response to the receiver, Werb et al. teaches a wired connection between the beacons (104a-d) and the receiver (cell controller) as shown in figure 1. One skilled in the art recognizes that transmitting a signal wirelessly is an alternative to transmitting a signal by wired means. The reference of Zai et al. is relied upon for teaching wireless transmission as an alternate to wired transmission (col. 6 lines 50-51).

Regarding applicant argument concerning a transponder module that is releasable attached to a disposable wrist band, it is a conventional practice to attach a transponder module to an items or persons for tracking purposes as further evidenced by Werb et al. (col. 3 lines 51-52). A tag attached to an item implies that the tag is not a part of the item and is therefore releasable attached because it is detachable from the item.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6, 10, 12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329.

Regarding claim 1, Werb et al. teaches a system for monitoring locations of movable objects (figure 1), comprising:

a plurality of beacons (104a-d) mounted in spatial distribution throughout a monitoring area of a building (col. 3 lines 51-62), each beacon transmitting wireless interrogation signal sequentially (col. 4 lines 26-28);

a plurality of transponders (tags), each transponder adapted to be attached to a

moveable object, and to respond to the interrogation signals received from the beacons by echoing frequency-shifted versions of the interrogation signals (col. 4 lines 28-32);

a receiver (cell controller) that analyzes signals received from the plurality of beacons(col. 3 lines 60-61);

wherein each beacon retransmits an interrogation signal (col. 4 lines 25-28) and a resulting transponder response to the receiver for analysis, and the receiver determines a time difference between the interrogation signal and the transponder response retransmitted by the beacon, said time difference reflecting a distance between the beacon and the transponder (col. 4 lines 33-36). Werb et al. further teaches the tag communicating using time division multiple access (col. 7 lines 46-47). Werb et al. is however silent on teaching the beacon wirelessly transmit the signal to the receiver. One skilled in the art recognize that transmitting a signal wirelessly is an alternative to transmitting a signal by wired means as further evidenced by Zai et al. (col. 6 lines 50-51).

It would have been obvious to one of ordinary skill in the art for the beacon wirelessly transmit the signal to the receiver in Werb et al. as evidenced by Zai et al. because Werb et al. teaches the use of a wired connection for transmitting data to the receiver and one skilled in the art recognizes that transmitting a signal wirelessly is an alternative to transmitting a signal by wired means as further evidenced by Zai et al.

Regarding claim 6, Werb et al. teaches the wireless interrogation signals are RF (col. 5 lines 30-31).

Regarding claim 10, Werb et al. teaches retransmitting the interrogation signal (col. 2 lines 1-2) and the transponder (tag) response wirelessly (figure 1).

Regarding claim 12, Werb et al. teaches a computer system (figure 1) that uses time differences measured by the receiver in combination with a topological tracking (determining the location at different points) method to determine the locations of the objects (col. 5 lines 5 –15).

Regarding claim 15, Werb et al. teaches a method of determining the distance between a beacon and a transponder (col. 4 lines 9-12), comprising:

(a) transmitting an interrogation signal by wireless communications from the beacon to the transponder within an interrogation frequency band of the transponder to cause the transponder to return a response signal, the response signal being a frequency- shifted version of the interrogation signal (col. 4 lines 28-32);

(b) concurrently with (a), transmitting the interrogation signal from the beacon to a receiver (cell controller) which is positioned remotely from the beacon (col. 4 lines 5-12);

(c) the beacon receiving and retransmitting wirelessly the response signal (col. 4 lines 25-28);

(d) determine the time difference between the interrogation signal and the signal retransmitted by the beacon (col. 4 lines 33-36). Werb et al. is however silent on teaching the beacon wirelessly transmit the signal to the receiver. One skilled in the art recognize that transmitting a signal wirelessly is an alternative to transmitting a signal by wired means as further evidenced by Zai et al. (col. 6 lines 50-51).

It would have been obvious to one of ordinary skill in the art for the beacon wirelessly transmit the signal to the receiver in Werb et al. as evidenced by Zai et al. because Werb et al. teaches the use of a wired connection for transmitting data to the receiver and one skilled in the

art recognizes that transmitting a signal wirelessly is an alternative to transmitting a signal by wired means as further evidenced by Zai et al.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of D'Hont et al. U.S Patent 5453747.

Regarding claim 18, Werb et al. in view of Zai et al. teaches the beacon transmitting signal to the transponder and receiver (*see response to claim 15*) but is silent on teaching the signal transmitted to the receiver is in a different frequency band than the signal transmitted to the transponder. D'Hont et al. in an art related transponder communication system teaches an interrogator operating with different frequency channels for communication (col. 2 lines 46-65).

It would have been obvious to one of ordinary skill in the art to have the signal transmitted to the receiver is in a different frequency band than the signal transmitted to the transponder in Werb et al. in view of Zai et al. as evidenced by D'Hont et al. because Werb et al. in view of Zai et al. suggests the beacon transmitting signal to the transponder and receiver and D'Hont et al. teaches an interrogator operating with different frequency channels for communication in order to avoid interference

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 in view of D'Hont et al. U.S Patent 5453747 and further in view of Guthrie et al. U.S Patent 6058374.

Regarding claim 19, Werb et al. in view of Zai et al. in view of D'Hont teaches an interrogator transmitting at multiple frequency band (see response to claim 18) but is silent on

teaching transmitting the interrogation signal from the beacon to the receiver at a higher transmission power than the transmission power used to transmit the interrogation signal. Guthrie et al. in an art related transponder system teaches the use of different frequency band for high and low transmission power application (col. 16 lines 3-6).

It would have been obvious to one of ordinary skill in the art to the interrogation signal from the beacon to the receiver at a higher transmission power than the transmission power used to transmit the interrogation signal in Werb et al. in view of Zai et al. in view of D'Hont as evidenced by Guthrie et al. because Werb et al. in view of Zai et al. in view of D'Hont suggests an interrogator transmitting at multiple frequency band and system teaches the use of different frequency band for high and low transmission power application.

Claims 2 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Doany U.S Patent 6,377,203.

Regarding claims 2 and 21, Werb et al. in view of Zai et al. teaches the transponders (tags) uses time division multiplexing (TDMA) but is not explicit in teaching the assignment of timeslot in the TDMA frame to the transponder (col. 7 lines 46-47). One skilled in the art recognizes that use of TDMA requires the assignment of time slot as evidenced by Doany (col. 4 lines 16-19), therefore it is obvious to assign timeslots to each transponder.

It would have been obvious to one ordinary skill in the art to assign timeslot in the TDMA frame to the transponders in Werb et al. in view of Zai et al. as evidenced by Doany because Werb et al. in view of Zai et al. suggests transponders (tags) uses time division

multiplexing (TDMA) and one skilled in the art recognizes that use of TDMA requires the assignment of time slot as evidenced by Doany, therefore it is obvious to assign timeslots to each transponder.

Claims 3 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Pennington U.S Patent 4882664.

Regarding claims 3 and 22, Werb et al. in view of Zai et al. teaches synchronizing the transmitters (col. 13 lines 44-49) but is silent on teaching synchronizing the beacons by monitoring the phase of an alternating current. Pennington in an art related synchronous circuitry teaches the synchronizing a device by monitoring the phase on an alternating current (col. 3 lines 5-10).

It would have been obvious to one ordinary skill in the art to synchronize the beacons by monitoring the phase of an alternating current in Werb et al. in view of Zai et al. as evidenced by Pennington because Werb et al. in view of Zai et al. suggests synchronization of the beacons and Pennington teaches the synchronizing a device by monitoring the phase on an alternating current used by the device.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 in view of Pennington U.S Patent 4882664 and further in view of Parulski et al. U.S Patent 5251021.

Regarding claim 4, Werb et al. in view of Zai et al. in view of Pennington teaches synchronizing the beacons (antenna modules) and synchronizing a device to the phase of the alternating current (as discuss in the response to claim 3) but is however silent on teaching

monitoring the phase of the AC power signal by monitoring the flicker of lights in the building. One skilled in the art recognizes the flickering of the light in a building reflects the phase of the alternating current therefore it is obvious to use the flickering of the light as a phase reference as evidenced by Parulski et al. (col. 4 lines 55-59).

It would have been obvious to one of ordinary skill in the art to monitor the phase of the AC power signal by monitoring the flicker of lights in the building in Werb et al. in view of Zai et al. in view of Pennington as evidenced by Parulski et al. because Werb et al. in view of Zai et al. in view of Pennington suggests synchronizing the beacons (antenna modules) and synchronizing a device to the phase of the alternating current and one skilled in the art recognizes the flickering of the light in a building reflects the phase of the alternating current therefore it is obvious to use the flickering of the light as a phase reference as evidenced by Parulski et al.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Lemelson U.S Patent 4,434,510.

Regarding claim 5, Werb et al. in view of Zai et al. teaches the use of DC power source (col. 10 line 58) but is silent on teaching the beacons are photo-electrically powered. One skilled in the art recognizes that it is a conventional practice to powered an apparatus by converting light energy into electrical energy and photo-electrically powering a beacon is further evidenced by Lemelson (col. 3 lines 63-66).

It would have been obvious to one of ordinary skill in the art to have photo-electrically powered beacon in Werb et al. in view of Zai et al. as evidenced by Lemelson because Werb et al. in view of Zai et al. suggests the powering of the beacon and one skilled in the art recognizes that it is a conventional practice to powered an apparatus by converting light energy into electrical energy and photo-electrically powering a beacon is further evidenced by Lemelson.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Schulman et al. U.S Patent 6564807.

Regarding claim 7, Werb et al. in view of Zai et al. teaches the wireless interrogation signals are RF (col. 5 lines 30-31) but is silent on teaching wireless interrogation signals are ultrasonic. Schulman et al. in an art related invention in the same field of endeavor of monitoring apparatus teaches the use of RF and ultrasonic interrogation signals (col. 4 lines 43-45) as suitable medium for transmitting an interrogation signal.

It would have been obvious to one of ordinary skill in the art to use ultrasonic interrogating signal in Werb et al. in view of Zai et al. as evidenced by Schulman et al. because Werb et al. in view of Zai et al. suggests the use of wireless RF interrogation signals and Schulman et al. teaches the use of RF and ultrasonic interrogation signals as suitable medium for transmitting an interrogation signal.

Claims 8-9, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Stierlin et al. U.S Patent 6407695.

Regarding claims 8 and 16, Werb et al. in view of Zai et al. teaches determining the distance of the transponder in relation to the interrogating unit (col. 4 lines 33-36) but is silent on teaching each interrogation signal includes a linear ramp portion in which a frequency of the interrogation signal is ramped linearly over a period of time, and wherein the receiver measures a time difference between the linear ramp portion as included in the retransmitted interrogation and transponder signals received from a beacon. Stierlin et al. in an art related invention in the same field of endeavor of locating objects teaches a method of determining the distance by allowing each interrogation signal to includes a linear ramp portion in which a frequency of the interrogation signal is ramped linearly over a period of time, and wherein the receiver measures a time difference between the linear ramp portion as included in the retransmitted interrogation signal (col. 9 line 53-col. 10 line 6) for measuring the distance of the transponder from the interrogating unit.

It would have been obvious to one of ordinary skill in the art to have each interrogation signal includes a linear ramp portion in which a frequency of the interrogation signal is ramped linearly over a period of time, and wherein the receiver measures a time difference between the linear ramp portion as included in the retransmitted interrogation and transponder signals received from a beacon in Werb et al. in view of Zai et al. as evidenced by Stierlin et al. because Werb et al. in view of Zai et al. suggests determining the distance between the transponder and the interrogating unit and Stierlin et al. teaches each interrogation signal includes a linear ramp portion in which a frequency of the interrogation signal is ramped linearly over a period of time, and wherein the receiver measures a time difference between the linear ramp portion as included

in the retransmitted interrogation signal in order to measure the distance of the transponder from the interrogating unit.

Regarding claim 9, Werb et al. in view of Zai et al. teaches determining the distance of the transponder in relation to the interrogating unit (col. 4 lines 33-36) but is silent on teaching the receiver measures the time difference by detecting and determining a time difference between peaks of the linear ramp portion. Stierlin et al. in an art related invention in the same field of endeavor of locating objects teaches a method of determining the distance by allowing each interrogation signal to includes a linear ramp portion in which a frequency of the interrogation signal is ramped linearly over a period of time and the response signal of the transponder is converted proportional distances (col. 9 line 53-col. 10 line 6). Stierlin et al. further teaches the receiver measures the time difference by detecting and determining a time difference between peaks of the linear ramp portion (figure 2A).

It would have been obvious to one of ordinary skill in the art for the receiver to measure the time difference by detecting and determining a time difference between peaks of the linear ramp portion in Werb et al. in view of Zai et al. as evidenced by Stierlin et al. because suggests determining the distance between the transponder and the interrogating unit and Stierlin et al. teaches determining the distance between the interrogator and the transponder unit by the receiver measuring the time the time difference by detecting and determining a time difference between peaks of the linear ramp portion.

Claim 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Guthrie et al. U.S patent 6058374.

Regarding claims 11 and 20, Werb et al. in view of Zai et al. teaches the use of AC power lines as a data transfer mechanism (col. 4 lines 50-55) but is silent on teaching the beacon transmit the transponder response to the receiver over the AC power lines. Guthrie et al. in an art related invention in the same field of endeavor of monitoring system using transponder teaches a beacon (transceiver) communicating over the AC power line (col. 8 lines 18-22).

It would have been obvious to one of ordinary skill in the art for the beacon to transmit the transponder response to the receiver over the AC power lines in Werb et al. in view of Zai et al. as evidenced by Guthrie et al. because Werb et al. in view of Zai et al. suggests the use of AC power lines as a data transfer mechanism and Guthrie et al. teaches a beacon (transceiver) communicating over the AC power line.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werb et al. U.S Patent 6,150,921 in view of Zai et al. U.S Patent 6122329 and further in view of Gaisser et al. U.S Patent 6104295.

Regarding claims 13-14, Werb et al. in view of Zai et al. teaches the use of transponders attached to people for tracking purposes (col. 3 lines 51-52) but is silent on teaching transponders worn as wristband and is disposable. Gaisser et al. in an art related invention in the same field of endeavor of transponders teaches transponders worn as wristband by patient (col. 5 lines 28-30) in order to enable the location of a person and the wristband is inexpensive and disposable (col. 5 line 31)

It would have been obvious to one of ordinary skill in the art to have transponders worn as wristband in Werb et al. in view of Zai et al. as evidenced by Gaisser et al. because Werb et al.

in view of Zai et al. suggests transponders attached to people for tracking purposes and Gaisser et al. teaches transponders worn as wristband by patient in order to enable the location of a person.

Claims 23-24, 26, 28, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Werb et al. U.S Patent 6,150,921.

Regarding claims 23 and 35, Gaisser et al. teaches a transponder device adapted to be worn by a patient to permit the patient's location to be monitored (col. 5 lines 27-32). Gaisser et al. further teaches the transponder device comprising a disposable wristband (col. 5 lines 31-32). Gaisser et al. is however silent on teaching a transponder module which is adapted to be releasable attached to the disposable wristband and the transponder module is responsive to a wireless interrogation signal received within a first frequency band by echoing the interrogation signal within a second frequency band. Werb et al. in an art related Article tracking System teaches transponder are attached to things or people been tracked (col. 3 lines 51-52). A tag attached to an item implies that the tag is not a part of the item and is therefore releasable attached because it is detachable from the item. Werb et al. teaches the transponder module is responsive to a wireless interrogation signal received within a first frequency band by echoing the interrogation signal within a second frequency band (col. 4 lines 28-32).

It would have been obvious to one of ordinary skill in the art to have a transponder module which is adapted to be releasable attached to the disposable wristband and the transponder module is responsive to a wireless interrogation signal received within a first frequency band by echoing the interrogation signal within a second frequency band in Gaisser et

al. as evidenced by Werb et al. because Gaisser et al. teaches a transponder device adapted to be worn by a patient to permit the patient's location to be monitored and Werb et al. teaches a transponder is responsive to a wireless interrogation signal received within a first frequency band by echoing the interrogation signal within a second frequency band and also attaching a transponder to a item to be track.

Regarding claim 24, Gaisser et al. teaches the disposable wristband includes a battery (18) which powers the transponder module (figure 2).

Regarding claim 26, 28, and 38-39, Gaisser et al. teaches the transponder module is adapted to sense an identifier of the disposable wristband (col. 5 lines 45-47) and the identifier is encoded within a passive electrical circuit of the wrist band (col. 5 lines 45-47).

Claims 25 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Werb et al. U.S Patent 6,150,921 and further in view of Wurz et al. U.S Patent 5838253.

Regarding claims 25 and 36, Gaisser et al. teaches the disposable wristband includes a battery (18) which powers the transponder module (figure 2) but is silent on teaching the battery is a zinc air battery. Wurz et al. in an art related invention in the same field of endeavor of transponder teaches the use of zinc air battery in a transponder (col. 6 lines 15-18) in order to conserve the battery use until the wrist band is ready to be used.

It would have been obvious to one of ordinary skill in the art to use a zinc air battery in Gaisser et al. in view of Werb et al. as evidenced by Wurz et al. because Gaisser et al. in view of

Werb et al. suggests powering a transponder using a battery and Wurz et al. teaches powering a transponder with a zinc air battery in order to conserve the battery use until the wrist band is ready to be used.

Claims 27 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Werb et al. U.S Patent 6,150,921 and further in view of Lavoi U.S Patent 6,480,699.

Regarding claims 27 and 37, Gaisser et al. in view of Werb et al. teaches the transponder providing identification information (col. 5 lines 45-46) but is silent on teaching the identifier is printed on a surface of the wristband in a conductive ink. Lavoi in an art related invention in the same field of endeavor of transmitting device teaches printing of identifier using conductive ink on surface of a transponder (col. 20 lines 39-42) for informational purposes.

It would have been obvious to one of ordinary skill in the art for the identifier to be printed on a surface of the wristband in a conductive ink in Gaisser et al. in view of Werb et al. as evidenced by Lavoi because Gaisser et al. in view of Werb et al. suggests providing identification information and Lavoi teaches printing of identifier using conductive ink on surface of a transponder for informational purposes

Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Werb et al. U.S Patent 6,150,921 and further in view of Flach et al. U.S Patent 5944659.

Regarding claims 29-30, Gaisser et al. in view of Werb et al. teaches synchronization of the transmitting modules (U.S Patent 6,150,921, col. 13 lines 44-49) and further teaches the use of time division multiplexing (U.S Patent 6,150,921, col. 7 lines 46-47) but is silent on teaching the transponder circuit uses periodically transmitted synchronization signal to determine when to transmits and the transponder transmit only in the assign timeslot. Flach et al. in an art related invention in the same field of endeavor of transponder system teaches synchronizing the transponders by periodically transmitted synchronization sequence of time slots and the transponders transmits in the assign timeslot (col. 13 lines 5-15) in order to prevent collision between the transmitted signal.

It would have been obvious to one of ordinary skill in the art for the transponders to use periodically transmitted synchronization signal to determine when to transmits and the transponder transmit only in the assign timeslot in Gaisser et al. in view of Werb et al. as evidenced by Flach et al. because Gaisser et al. in view of Werb et al. suggests synchronization of the transmitting modules and the use of time division multiplexing and Flach et al. teaches synchronizing the transponders by periodically transmitted synchronization sequence of time slots and the transponders transmits in the assign timeslot in order to prevent collision between the transmitted signals.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Werb et al. U.S Patent 6,150,921 in view of Flach et al. U.S Patent 5944659 and further in view of Houggy et al. U.S Patent 5838226.

Regarding claim 31, Gaisser et al. in view of Werb et al. in view of Flach et al. teaches assigning timeslot to the transponders as discussed in the response to claim 30 but is silent on teaching the timeslot is derived from the phase of an AC power signal. Houggy et al. in an art related transmitter/receiver system teaches deriving the timeslot from the AC power signal (col. 29 lines 65-67) in order to prevent collision between the transmitted signals.

It would have been obvious to one of ordinary skill in the art to derive the from the phase of an AC power signal in Gaisser et al. in view of Werb et al. in view of Flach et al. as evidenced by Houggy et al. because Gaisser et al. in view of Werb et al. in view of Flach et al. suggests assigning timeslot to the transponders Houggy et al. teaches deriving the timeslot from the AC power signal in order to prevent collision between the transmitted signals.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Werb et al. U.S Patent 6,150,921 and further in view of Urbas et al. U.S 5650778.

Regarding claim 32, in Gaisser et al. in view of Werb et al. teaches a transponder in the form of a wristband worn by a patient (col. 5 lines 27-32, U.S Patent 6104295) but is silent on teaching the transponder module is sterilized between uses. One skilled in the art recognizes that sterilization is widely use to prevent transmitting infection and it is therefore obvious to sterilize the transponder worn by Gaisser et al. in view of Werb et al. as is further evidenced by Urbas et al. (col. 1 lines 30-32) to prevent the spread of infection.

It would have been obvious to one of ordinary skill in the art to sterilized the transponder module between uses in Gaisser et al. in view of Werb et al. as evidenced by Urbas et al. because Gaisser et al. in view of Werb et al. suggests a transponder in the form of a wristband

worn by a patient and one skilled in the art recognizes that sterilization is widely use to prevent transmitting infection and it is therefore obvious to sterilize as evidenced by Urbas et al. in order to prevent the spread of infection.

Claims 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaisser et al. U.S Patent 6104295 in view of Schulman et al. U.S Patent 6564807.

Regarding claims 33-34, Gaisser et al. teaches the wireless interrogation signals are RF (col. 5 lines 55-56) but is silent on teaching wireless interrogation signals are ultrasonic. Schulman et al. in an art related invention in the same field of endeavor of monitoring apparatus teaches the use of RF and ultrasonic interrogation signals (col. 4 lines 43-45) as suitable medium for transmitting an interrogation signal.

It would have been obvious to one of ordinary skill in the art to use ultrasonic interrogating signal in Gaisser et al. as evidenced by Schulman et al. because Gaisser et al. suggests the use of wireless RF interrogation signals and Schulman et al. teaches the use of RF and ultrasonic interrogation signals as suitable medium for transmitting an interrogation signal.

Allowable Subject Matter

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 17, the prior art of record fail to teach or suggest the interrogation signal includes a root-raised cosine waveform.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U Brown whose telephone number is 703-305-3864. The examiner can normally be reached on M-Th, 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

Vernal Brown
July 22, 2004

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600